CLAIMS

1. An electric power variation compensating device in a compound system ~~of a~~ for wind power generation and an electric power energy storage including a wind power generator and an electric power energy storage device and an electric power converting device provided in parallel therewith, characterized in that the electric power variation compensating device comprises means ~~(8a)~~ for detecting a composite current (Iw) of the wind power generator ~~(1a, 1b)~~; means ~~(9a)~~ for detecting a voltage (Vs) of an electric power system ~~(18)~~ to which the wind power generator ~~(1a, 1b)~~ and the electric power energy storage device ~~(4a)~~ and the electric power converting device ~~(6a, 6b)~~ are connected; and means ~~(8b)~~ for detecting a current (Ic) either inputted into or outputted from the electric power converting device ~~(6a, 6b)~~; wherein an output electric power (Pw, Qw) of the wind power generator ~~(1a, 1b)~~ is computed according to the detected voltage (Vs) of the electric power system ~~(18)~~ and the detected composite current value (Iw) and ~~as well as~~ an input or output electric power (Pc, Qc) of the electric power converting device ~~(6a, 6b)~~ is computed according to the detected voltage (Vs) of the electric power system ~~(18)~~ and the detected current value (Ic) of the electric power converting device ~~(4a)~~, and the

computed output electric power (Pw, Qw) of the wind power generator ~~(1a, 1b)~~ and the computed input or output electric power (Pc, Qc) of the electric power converting device ~~(6a, 6b)~~ are used as an electric power feed-back in a control system ~~(11a)~~ for the electric power converting device ~~(6a, 6b)~~.

2. An electric power variation compensating device in a compound system for a wind power generation and an electric power energy storage including a wind power generator and an electric power energy storage device and an electric power converting device provided in parallel therewith, characterized in that the electric power variation compensating device comprises means ~~(8c)~~ for detecting a composite current (Iw) of the wind power generator ~~(1c, 1d)~~; means ~~(9b)~~ for detecting a voltage (Vs) of an electric power system ~~(18)~~ to which the wind power generator ~~(1c, 1d)~~ and the electric power energy storage device ~~(4b)~~ and the electric power converting device ~~(6c, 6d)~~ are connected; and means ~~(8d)~~ for detecting a current in the electric power system ~~(18)~~; wherein an output electric power (Pw, Qw) of the wind power generator ~~(1c, 1d)~~ is computed according to the detected voltage (Vs) of the electric power system ~~(18)~~ and the detected composite current value (Iw) and ~~as well as~~ an input or output electric power (Pc, Qc) of the electric power converting device ~~(6c, 6d)~~ is computed

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according to the detected voltage (Vs) of the electric power system ~~(18)~~ and the detected current value of the electric power system ~~(18)~~, and the computed output electric power (Pw, Qw) of the wind power generator ~~(1c, 1d)~~ and the computed input or output electric power (Pc, Qc) of the electric power converting device ~~(6c, 6d)~~ are used as an electric power feed-back in a control system ~~(11b)~~ for the electric power converting device ~~(6c, 6d)~~.

3. An electric power variation compensating device according to claim 1 or claim 2, characterized in that an amount of the electric power used for the electric power feed-back in the control system ~~(11a, 11b)~~ is a value (Pf, Qf) in which either the active electric power (Pw) or the reactive electric power (Qw) in the output electric power of the wind power generator ~~(1a, 1b, 1c, 1d)~~ each of which low frequency components (PwL) are excluded through a low frequency pass filter ~~(12a, 12b)~~ is added to either the active electric power (Pc) or the reactive electric power (Qc) in the input or output electric power of the electric power converting device ~~(6a, 6b, 6c, 6d)~~.

4. An electric power variation compensating device according to claim 3, characterized in that either the active electric power (Pc) or the reactive electric power (Qc) in the input or output electric power of the electric power converting device ~~(6a, 6b,~~

~~6c, 6d~~) is determined by subtracting either the active electric power (Pw) or the reactive electric power (Qw) in the output electric power of the wind power generator ~~(1a, 1b, 1c, 1d)~~ from the electric power of the electric power system ~~(18)~~.

5. An electric power variation compensating device according to ~~claim 3 or~~ claim 4, characterized in that the electric power variation compensating device further comprises a change-over switch (A, B) which makes or interrupts the active electric power (Pw) or the reactive electric power (Qw) in the output power of the wind power generator ~~(1a, 1b, 1c, 1d)~~, and another change-over switch (C) which makes or interrupts low frequency components (PwL) of the active electric power (Pw) or the reactive electric power (Qw) in the output electric power of the wind power generator ~~(1a, 1b, 1c, 1d)~~.

6. An electric power variation compensating device according to ~~one of claims 1 through 5~~ claim 1, characterized in that a superconducting magnetic energy storage device ~~(17a)~~, a static var compensating device ~~(17b)~~ or an adjustable speed electric power generating system ~~(17c)~~ is used as the electric power energy storage device ~~(4a, 4b)~~.

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